MULTIPLE HORIZONTAL NEEDLE QUILTING MACHINE AND METHOD

Abstract of the Disclosure:

A multi-needle quilting machine (10) and method are provided, in most embodiments of which needles (132) reciprocate horizontally through material (12) supported in a vertical quilting plane (16). Two or more bridges (21,22) are provided having separate motion control. Each bridge (21,22) has a row of selectively operable stitching element pairs (90), which may be fixed to or transversely moveable on the bridges (21,22). Either the material or the bridges may be moved relative to the frame. The bridges (21,22) each move transversely and vertically with the stitching elements (90) on each bridge can operate at different speeds. Each of the needle drives (25) and, in some embodiments the looper drives (26), can be selectively activated and deactivated. Control schemes are provided to quilt continuous patterns, discrete patterns, linked multiple patterns, 360 degree patterns, closely spaced patterns. A plurality of small presser feet (158) are provided, each for one or more needles (132). Looper adjustment, thread cutting and thread tension control are provided, as well as other features set forth in the specification. Thread tail wipe and tuck techniques, missed stitch avoidance, stitching element timing, tacking sequences, and other features are disclosed.